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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/604,283	06/26/2000	Oscar Veniaminovich Zhuk	28827-8001US	4314

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EXAMINER

FOSTER, ROLAND G

ART UNIT	PAPER NUMBER
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2645

DATE MAILED: 09/10/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/604,283

Applicant(s)

ZHUK ET AL.

Examiner

Roland G. Foster

Art Unit

2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☒ Claim(s) 3, 7, 19, 23, 27, 34, 43, 46, 52, 57 and 65 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 1,3,5,7,9,11-15,19,21,23-25, 27, 29-32,34,36,37,39-41,43,46,48-50,52-55,57,59-63,65 and 68.

Continuation of Disposition of Claims: Claims rejected are 1, 5, 9, 11-15, 21, 24, 25, 29, 30-32, 36, 37, 39-41, 48-50, 53-55, 59-63, and 68.

Art Unit: 2645

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Species I in the reply filed on June 15, 2004 as Paper No. 6 is acknowledged. Applicant should note that claim 67 is not generic because it depends from non-elected, claim 66, which belong within Species II (see the prior Written Election Requirement for further details).

Information Disclosure Statement

Examiner was unable to locate the Information Disclosure Statement ("IDS"), filed on Oct. 17, 2000 as Paper No. 2 within the application file wrapper. Therefore, applicant is requested to resubmit the IDS for consideration.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 5, 9, 11, 12, 14, 15, 21, 25, 29, 30, 31, 36, 39, 40, 48, 50, 61, 62, 63, and 68 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,421,761 B1 to Rai et al. (hereinafter "Rai").

With respect to claim 1, Rai discloses a computer in the form of a registration server (Fig. 21), which is coupled to a set of organized and structured data used to store user profile information for each end user (e.g., a mobility security association comprising multiple security contexts that each define authentication algorithms, modes, public and private secret keys, types of encryption, etc.) that is organized for quick retrieval and access, such as during the registration phase of an incoming call (col. 23, line 63 – col. 24, line 52). Network users are allowed to use the profile information to define multiple security contexts (modes) (col. 24, lines 12-20). Thus, the computer (registration server) can be considered as coupled to a database, which stores the user profile information that indicates a plurality of security modes (e.g., a plurality of security contexts).

The computer (registration server) also receives telecommunication data transmissions (col. 5, lines 18-40).

The system receives a mode selection user input when the user configures a shared secret key, security parameter index (SPI), and user name for the registration server using Win 95 based software (col. 24, lines 12-20 and lines 46-52). The settings are stored in the user profile at the registration server.

In response to a telecommunication call, such as a mobile call requiring authentication, an authorization user input (authenticator) is computed at the end user device and received at the registration server (col. 23, lines 39-54 and col. 24, lines 20-37). The registration server then

Art Unit: 2645

dynamically generates (computes) a security code that is compared to the received authorization input (col. 23, lines 55-62 and col. 24, lines 30-37).

Claims 5, 21, 30, 36, 39, and 48 differ substantively from claim 1 in that the subject claims and 21 are directed to methods, apparatuses, and computer programs comprising steps and functions equivalent to the functions performed by the system of claim 1. Additionally, the subject claims are more broadly recited than claim 1. Therefore, see the claim 1 rejection for further details.

Claim 61 differ substantively from the claims discussed above in that claim 61 recites "field" identifying the security modes and parameters associated with the security modes, which reads on the "security contexts" of Rai, which are security mode fields indexed by the SPI that in turn comprise a variety of sub-fields corresponding to security mode settings and various parameters associated with the modes (see the claim 1 rejection and col. 24, lines 1-37).

Claim 68 differs substantively from claim 1 in that claim 69 recites specific apparatus components. For example, "mobile telecommunications device having a wireless transceiver" reads on wireless device 36, "user-input and output devices" including a "processor" reads on computers 32. The remote "server" reads on MSC 40.

With respect to claims 9, 31, and 62, the event is an incoming call comprising data signals.

With respect to claims 11 and 12, the authorization provides the user with the ability to access Internet or Intranet data files (Fig. 2).

With respect to claims 14 and 29, once the user selects the security mode (as discussed in claim 1) and then is allowed access would indicate to the user the "indicated" or "currently applied" security mode.

With respect to claim 15, the "authenticator" (encryption code) is sent from the user in encrypted MD5 to the system and then used by the system (e.g., using the authenticator's SPI to select a shared secret) in order to decrypt the shared secret that the authenticator specifies (col. 24, lines 1-38).

With respect to claim 25, see the claim 1 rejection for further details.

With respect to claim 40, see Fig. 2.

With respect to claim 50, see the claim 1 rejection for further details.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 53-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rai in view of U.S. Patent No. 6,396,916 B2 to Jordan (hereinafter "Jordan").

Claims 53 and 54 differ substantively from the previous independent claims discussed above in that claim 53 recites that the user is "prompted" to enter the various modes, modifications, and codes. Although Rai discloses the ability to enter the various modes (as discussed above), Rai fails to disclose that the user is prompted to do so.

Art Unit: 2645

However, Jordan (similarly to Rai) teaches of a telephonic, authentication system based on the use of dynamically generated security codes (abstract, Fig. 2, and col. 8, lines 6-27) that also uses an automated response system to prompt the user for all the required inputs via a voice guidance interface (col. 4, lines 58-67).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to add to the dynamic code based authentication system of Rai the ability to prompt for the necessary inputs as taught by the dynamic code based authentication system of Jordan.

The suggestion/motivation for doing so would have been to increase user-friendliness, accuracy, and efficiency and to reduce the cost of the Rai's user interface by providing voice guidance, which helps the inexperienced user more efficiently and accurately interact with the system while avoiding the labor cost of a human operator or agent, as is well known in the art of automated response systems.

With respect to claim 55, Rai fails to specifically disclose that the user is prompted via a display. However, Rai discloses that the user profile modification is accomplished using a Win 95 based computer system (col. 24, lines 46-53).

Art Unit: 2645

"Official Notice" is taken that software running a typical computer system (e.g., Win95) as disclosed by Rai would have include display information to prompt the user on how to use the software.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to add display prompting to the Win95 based, computer system running configuration software as disclosed by Rai.

The suggestion/motivation for doing so would have been to increase user-friendliness, accuracy, and efficiency and to reduce the cost of the Rai's user interface by providing display guidance, which helps the inexperienced user more efficiently and accurately interact with the system as is well known in the art of computer systems with online help systems.

Claims 59 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rai in view of U.S. Patent No. 5,455,861 to Faucher et al. (hereinafter "Faucher").

Claims 59 and 60 differ substantively from the previous independent claims discussed above in that claim 53 recites that at least one security mode has an associated fee higher than a fee associated with other security modes, where the user is charged with the associated higher fee. Rai fails to disclose this difference.

Art Unit: 2645

However, Faucher (similarly to Rai) teaches of a telephonic, authentication system (abstract and col. 23, lines 24-43) that comprises at least one security mode (e.g., secure-to-clear, secure-to-secure) in which the mode has an higher fee associated with and charged to the caller as opposed to other security modes (clear-to-secure), which are charged to the called party instead (i.e., caller sees a lower charge). In addition, security modes involving decryption are associated with an additional, higher charge (col. 23, lines 24-64).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to add at least one security mode having an associated fee higher than a fee associated with other security modes and charging this higher fee to the user as taught by the telephonic, authentication system of Faucher to the telephonic, authentication system disclosed by Rai.

The suggestion/motivation for doing so would have been to decrease operating expenses, by charging the user for costs involved with increased service, such as the "encrypting/decrypting" services relied upon by both Faucher and Rai. In addition, the flexibility and user-friendliness of a charging arrangement would have been increased by charging the user with higher costs when appropriate but also providing an option to charge the user with less cost (i.e., charging to the called party such as in cases of collect calls) as is notoriously well known in the art of telephonic billing systems (e.g., see Faucher, col. 23, lines 58-64).

Art Unit: 2645

Claims 13, 24, 32, 37, 41, and 49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rai as applied to claims 5, 21, 30, 36, 39, and 48 above, and further in view of U.S. Patent No. 5,971,272 to Hsaio (hereinafter "Hsaio").

Rai fails to disclose that the user knows the security algorithm in order to approximately concurrently generate the security code.

However, Hsaio (similarly to Rai) teaches of telephonic, authentication system based on the use of dynamically generated security code (abstract and col. 5, lines 55-67), where the user knows the security algorithm in order to concurrent generate the security code (Fig. 1A, steps 70, 80, and 90 and col. 7, lines 52 – col. 8, line 31).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to add the ability for the user to know the security algorithm in order to generate the security code as taught by the telephonic, authentication system of Hsaio to the telephonic, authentication system disclosed by Rai to use security codes.

The suggestion/motivation for doing so would have been to increase the versatility of the authentication system by allowing users to dynamically generate security codes even at terminals with little computational ability (Hsaio, col. 4, lines 48-58), thus also increasing security by allowing the use of dynamic security codes (col. 3, lines 35-48).

Art Unit: 2645

Allowable Subject Matter

Claims 3, 7, 19, 23, 27, 34, 43, 46, 52, 57, and 65 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Examiner's Reasons for Indicating Allowable Subject Matter

Claim 3, 7, 19, 23, 27, 34, 43, 52, and 65 are directed to a security code based on a minimum list of many different factors that the prior art fails to teach or fairly suggest.

Claims 46 and 57 are directed to the user selecting the security code based on an initial code transmitted to the user.

Rai is the closes prior art applied above but fails to disclose that the security code is based on a list of many different factors as recited in the subject claims or that the user selected the security code based on an initial code transmitted to the user.

The remaining prior art of record fails to teach or fairly suggest substantially modifying Rai in order to arrive at the invention as claimed in detail by the applicant.

The above reasons for allowance are based on the claims as presently set forth in their totality. The above reasons for allowance should not be interpreted as indicating that amended claims broadly reciting certain limitations discussed in the above reasons for allowance would be

Art Unit: 2645

allowable. A more detailed reasons for allowance may be set forth in a subsequent Notice of Allowance if and when all claims in the application are put into a condition for allowance.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roland Foster whose telephone number is (703) 305-1491. The examiner can normally be reached on Monday through Friday from 9:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan S. Tsang, can be reached on (703) 305-4895. The fax phone number for this group is (703) 872-9309.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to customer service whose telephone number is (703) 306-0377.



Roland G. Foster
Primary Patent Examiner
September 7, 2004